

10/5/9 882
Rec'd PCT/PTO 30 DEC 2004

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



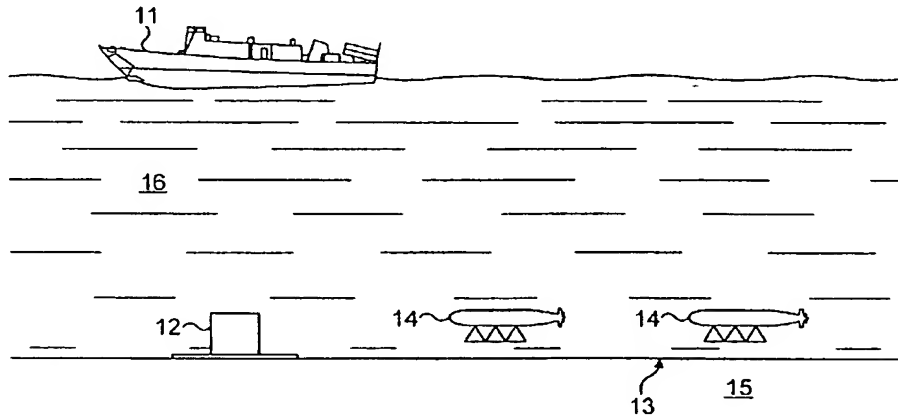
(43) International Publication Date
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number
WO 2004/003589 A1

- (51) International Patent Classification⁷: G01V 1/38 (74) Agents: REES, David, Christopher et al.; Kilburn & Strode, 20 Red Lion Street, London WC1R 4PJ (GB).
- (21) International Application Number: PCT/GB2003/002823 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 30 June 2003 (30.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0215214.8 1 July 2002 (01.07.2002) GB (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): STATOIL ASA [NO/NO]; N-4035 Stavanger (NO).
- (71) Applicant (*for IS only*): REES, David, Christopher [GB/GB]; Kilburn & Strode, 20 Red Lion Street, London WC1R 4PJ (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): MELDAHL, Paul [NO/NO]; Dyretraakket 8, N-4033 Forus (NO).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SEISMIC EXPLORATION



(57) Abstract: The present invention provides a seismic exploration and imaging system for producing seismic survey reports of subsea geological structures. The exploration system provides a method in which both P-waves and S-waves are detected without the need for placing detection apparatus in contact with the seabed. A seismic event is applied (12) to the earth's surface (13), and the detected response including P-waves and S-waves in the earth's. The detecting apparatus comprises a means for monitoring and recording the response to the seismic event in the form of movements of particles at the earth's surface, from a position spaced from the earth's surface. Particles at the surface will respond both to P-wave and S-wave stimulation and so their movements will be representative of the two waves. These movements are detected from a distance.

WO 2004/003589 A1